

# Christopher R. Culpepper

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www.github.com/cculpepper

**OBJECTIVE** To obtain a co-op position doing electronic hardware design or embedded software programming in the Spring of 2016 in order to further my education in the Computer Engineering field.

**EXPERIENCE** *Test Engineer Co-op* *January 2016 - May 2016*  
Space Exploration Technologies, Hawthorne CA

- Created software to automate the creation of trouble reports
- Developed tests to test flight avionics hardware
- Troubleshoot issues with avionics test racks

*Systems Engineering Co-op* *July 2013 - Present*  
General Dynamics Advanced Information Systems, Pittsfield MA

- Performed software and systems testing on weapon control software
- Managed requirements and test cases
- Developed automated testing tracker that was used to status testing progress to management

*Assembly Language Lab Teaching Assistant* *January 2015 - Present*  
Computer Engineering Department, RIT, Rochester, NY

- Responsible for grading student reports and assisting students with ARM assembly language

**PROJECTS** *High Altitude Balloon Telemetry Tracker*

- Personally developed hardware and software design and implementation
- Developing radio board to have the ability to use FSK, AFSK, or audio-based protocols
- Utilized multiple PCBs in order to separate functionality and increase reusability
- Can communicate GPS and other sensor data to the Amateur Radio APRS network

*Space Exploration Club High Altitude Balloon Data Logger*

- Software Lead in charge of ensuring correct and well-functioning software
- Developed drivers and application code to log required data
- Ensured code was maintainable, easy to read and extensible

*Wideband Oxygen Sensor Controller*

- Designed, built and programmed sensor controller that measured oxygen concentration
- Incorporated PID loops to keep a sensor at a constant temperature and oxygen concentration
- Could have been calibrated to measure accurate oxygen concentrations

*Assembly Language Pong Game*

- Created a 1.5D Pong game for a school project in HCS12 assembly
- Required HCS12 assembly, PWM, ADC and digital output

**AWARDS & SKILLS**

Eagle Scout	A+ Certified
Languages & Software:	
C	Visual Basic for Applications (VBA)
Python	VHDL
AutoIt	ARM & HCS12 Assembly
Microsoft Office	DOORS
Kicad	L <sup>A</sup> T <sub>E</sub> X

**EDUCATION** *Bachelor of Science*, Computer Engineering GPA: 3.03  
Rochester Institute of Technology, Rochester NY, Expected May 2017

Applied Programming	Data Communication and Networks
Computer Architecture	Introduction to Software Engineering
Digital Signal Processing	Digital System Design
Interface and Digital Electronics	Assembly Language Programming

**COMMUNITY SERVICE** *Adult leader in Boy Scout Troop 88, North Adams, MA*

- Assistant Scoutmaster
- Mentored Scouts to achieve rank and acquire valuable life skills

*Radio communication at multiple road rallies*

- Responsible for maintaining communication for racing stages and to central management
- Relayed pertinent information to competitors, stage captain and race officials
- Operated in a high-stress environment to prevent accidents and mistakes

**EXTRA-CURRICULAR ACTIVITIES** Amateur Radio Extra  
Motorcycle and Automobile repair  
Member of the K2GXT RIT Amateur Radio Club